

**REMARKS**

Favorable reconsideration of this application as amended is respectfully requested.

The Specification has been amended to correct minor typographical errors.

Claims 4, 5, 7-10, 13-16 and 18-21 have been amended. Claims 4, 5, 7-10, 13-16 and 18-21 remain active in the application. Claims 1, 2, 6, 11, 12 and 17 have been canceled. Claims 1-29 have been rejected under 35 U.S.C. §101 for not being directed to statutory subject matter. Claims have been rejected under 35 U.S.C. §102(a) but the Examiner has failed to indicate which claims are subject to the rejection. Applicant will treat this rejection as if it applies to independent claims 1 and 11. The Examiner has indicated that claims 4-10 and 15-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Briefly, applicant's invention is directed to a method of computing Instantaneous Frequency of a signal by using Generalized Zero-Crossing (GZC) approach. The GZC method includes inputting the signal, extracting a set of Intrinsic Mode Functions from the signal via Empirical Mode Decomposition, and generating a set of mean frequency functions from the Intrinsic Mode Functions and generating the instantaneous frequency base on critical points from the signal.

**Rejections Under 35 U.S.C. 101**

Examiner has rejected claims 1-29 under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter. Examiner asserts that claims 1 and 11 recite no clearly defined practical application of the claimed method or do not draw a conclusion as to the final end result of the mathematical operation. Applicant has amended claims 4 and 15 to include the recitation of "a physical signal from a physical device" and the step of "displaying the mean frequency function" in claim 4 and the step of "displaying said instantaneous frequency" in claim 15. Claims 4 and 15 now include limitations in the body of the claims directed to a real world application (displaying the mean frequency and instantaneous frequency) of the calculated results of the mathematical operation. It is submitted that the utility of displaying the mean frequency and instantaneous frequency would be known to a skilled artisan. Further the data represented (mean frequency and instantaneous frequency) is an intangible representation of a real world "physical signal." Therefore Applicant believes that amended claims 4 and 15 have overcome the statutory subject matter rejection under 35 U.S.C. §101.

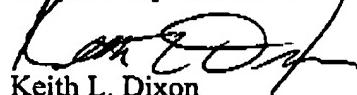
**Rejection Under 35 U.S.C. § 102(a)**

Applicant will treat Examiner's rejection under 35 U.S.C. §102(a) as applicable to independent claims 1 and 11. Salvino et al. however, does not disclose the limitations of claims 4 and 15. Applicant has presented claims 4 and 15 in independent form. The

Examiner has indicated that claims 4-10 and 15-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form. Therefore, amended claims 4 and 15 are believed to be allowable over the prior art of record. Thus, the present Application is now believed to be in condition for allowance.

Should any unresolved issues remain to the allowance of this application, the Examiner is invited to contact Applicant's attorney who may be reached at (301) 286-9279.

Respectfully submitted

  
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CERTIFICATE OF FACSIMILE

I certify that this correspondence is being  
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July 15, 2005

Keith L. Dixon